

**Faculty:** Faculty of Agriculture

**Project title:** Impact of agricultural land use on biodiversity and regional distribution of broomrapes (Orobanchaceae) in the Balkans.

**Main donator:** SEE.ERA-NET PLUS programme

**Period of realization:** 01.10.2010 – 30.09.2012

**Total budget of the project:** 105.215,00 EUR

**UGD role within the project:** Partner

**UGD coordinator of the project:** Prof. Ljupco Mihajlov

**UGD contact person:** Fidanka Trajkova

**Project summary:**

Broomrapes (Orobanchaceae) are parasitic plants that subsist on broad-leaf plants, thereby depleting them from nutrients, minerals and water. Several broomrape species parasite on important crops causing up to 70% losses in crop production. The current knowledge about broomrapes diversity and distribution on the Balkans is based on floristic records only. According to them on the Balkans broomrapes are represented by 3 genera and 35 species. This project is a product of the joint effort of research teams from six research institutions and three countries: Macedonia, Bulgaria and Serbia. The aim of this project is to explore and study economically important species of broomrapes in the Balkans. There will be application of combined classical taxonomic approach and modern techniques as molecular tools and GPS mapping for determination of the impact of land use for agriculture on broomrape's diversity and regional distribution.

The main objectives of the project are: 1. Characterization of broomrape species on the Balkans by means of molecular taxonomy; 2. Study of their co-evolution with the hosts, transition on crops/new host; 3. Habitat mapping of rare broomrape species; 4. Survey distribution of broomrape species in agro-ecosystems and map creation with GPS coordinates.

**Partner institutions:**

University of Plovdiv, Plovdiv, Bulgaria

Agrarian University, Plovdiv, Bulgaria

Agrobiointitute, Sofia, Bulgaria

University of Novi Sad, Novi Sad, Serbia

Tobacco and Tobacco Products Institute, Plovdiv, Bulgaria

**Short description of the realized activities:**

1. Visit of the partners in Bulgaria and Serbia, coordination meetings with the partners and project team meetings at the Faculty of Agriculture, GDU;
2. Field collection and botanical preservation of broomrape material from the territory of Republic of Macedonia;
3. Floristic determination of the collected material;
4. Procurement of the laboratory equipment and supplies for molecular taxonomy and laboratory;
5. One-week training for molecular taxonomy analyses for two young researchers at the Plovdiv University, Bulgaria.